

Date: Monday, 18/06/2007 12:35:18 PM  
 User: Linda Lacelle

## Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: X-TUBE EXTRUSION
Job Number	: 32920		
Estimate Number	: 12909		
P.O. Number	: <i>N/A</i>	Part Number	: D6008132
This Issue	: 18/06/2007 S.O. No. : <i>N/A</i>	Drawing Number	: D6008 REV A
Prsht Rev.	: NC	Project Number	: N/A
First Issue	: <i>N/A</i> Type : LANDING GEAR	Drawing Revision	: A
Previous Run	: <i>N/A</i>	Material	: <i>N/A</i>
Written By	: <i>W</i>	Due Date	: 25/06/2007
Checked & Approved By	:	Qty:	10 Um: Each
Comment	: Est Rev:A New Issue 07-06-18 JLM		

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

1.0

PG

PURCHASING



Comment: PURCHASING

Issue P/O: *3995**C207/10/18**(10)*

a) Order as per Dwg D6008

b) Material: 3.250 x 0.438 wall 7075-T6/T6511 (WW-T-700/7 or QQ-A-225/9 or QQ-A-200/11) seamless aluminum tube

c) Minimum ultimate tensile strength = 77 ksi

d) Minimum tensile yield strength = 66 ksi

e) Tolerance are per ASTM B210 (see details on Dwg D6008)

f) Material certification required

2.0

D6008132P

Crosstube extrusion



Comment: Qty.: 1.0000 (s)/Unit Total: 10.0000 (s)

Crosstube extrusion

3.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Receive &amp; Inspect For Transit Damage

Ensure material certification is attached

*C27/10/20**(11)*

4.0

QC6

DIMENSIONAL CHECK



Comment: DIMENSIONAL CHECK

Ensure Material certification comply to Dwg D6005

*SB 07.10.27**(11)*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: D Date: 07/10/28  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 18/06/2007 12:35:18 PM  
User: Linda Lacelle

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: X-TUBE EXTRUSION

Job Number: 32920

Part Number: D6008132

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

5.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 0054.1

6.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

7.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: CNC

m/ 07 10 27

(11)

8.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

(11)  
D 07/10/27

Job Completion



u 07-10-29

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

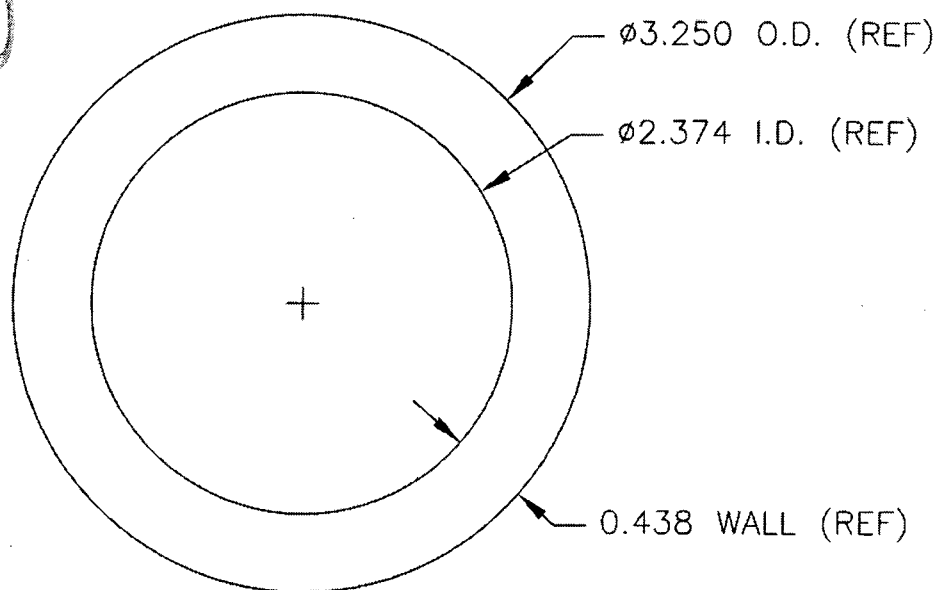
**NOTE:** Date & initial all entries



DESIGN <i>CP</i>	DRAWN BY <i>CP</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D6008	REV. A SHEET 1 OF 1
DATE 00.11.17		TITLE CROSSTUBE MATERIAL	SCALE 1:1
A	00.11.17	NEW ISSUE	

## SPECIFICATION CONTROL DRAWING

RELEASED  
00.11.24



### NOTES

- 1) D6008-XXX CROSSTUBE  
LENGTH

WHERE XXX IS LENGTH IN INCHES  
EG. 180" LONG TUBE: D6008-180

4032920

- 2) MATERIAL: 3.250-OD x 0.438 WALL 7075-T6/T6511 (WW-T-700/7 OR QQ-A-225/9 OR QQ-A-200/11) SEAMLESS ALUMINUM TUBE.  
MINIMUM ULTIMATE TENSILE STRENGTH = 77 ksi  
MINIMUM YIELD TENSILE STRENGTH = 66 ksi
- 3) TOLERANCES ARE PER ASTM B210 AS FOLLOWS:  
O.D.:  $\pm 0.008$  MEAN ( $\pm 0.016$  INCLUDING OVALITY)  
WALL:  $\pm 0.020$  MEAN ( $\pm 0.044$  INCLUDING ECCENTRICITY)  
LENGTH: XXX  $+0.125/-0.000$   
STRAIGHTNESS: 0.010" DEVIATION / 12" LENGTH
- 4) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 5) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

Copyright © 2000 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

# Abnahmeprüfzeugnis 3.1 - EN 10204:2004

Inspection Certificate 3.1 - EN 10204:2004 / Certificat de Reception 3.1- EN 10204:2004

**Kunde:** Dart Aerospace Ltd.  
**Client:**

1270 Aberdeen Street  
K6A1K7 Hawkesbury, ON Canada

**Zeugnisnummer:** 1007/07  
**Cert No. / No. du certificat:**  
**Bestellnummer:** PO 00003995  
**Order No. / No. de commande**  
**Auftrag:** 25361/1  
**Our Reference/Notre Ref.:**

**Produkt:** Rohre nahtlos gepresst  
**Product / Produit:** Tubes seamless extruded Tubes file sur aiguille

**Spezifikation:** AMS - QQ - A - 200/11; -  
**Specification:**

**Werkstoff:** EN AW-7075  
**Alloy/Alliage:** 3.4365

**Zustand:** T 6511  
**Temper/État**

**Abmessung:** 3,250 INCH x 2,374 INCH x 0,438 INCH x 132,000 INCH  
**Size / Dimension:** D6008-132 3.250 X 0.438 X 132

**Kennzeichnung:** ALUnna - Cert No. 1007/07 - 7075 - T 6511 - Cast No. ....- AMS QQA 200/11 - 3.250" OD X 0.438" Wall - Heat  
**Marking/Marquage:** No. 947/09 - Lot 25361/1-1 PO. 00003995

**Lieferung:** Stück/pcs. kg/kgs  
**Delivered Material / Matériel délivre:** 11 256,00

## 1. Chemische Analyse Chemical Analysis / analyse chimique

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Zr	Bi	Sn	Ni
Charge/ min.			1,2		2,1	0,18	5,1						
Cast No. max.	0,40	0,50	2,0	0,30	2,9	0,28	6,1	0,20					
01706073	0,12	0,28	1,48	0,04	2,5	0,18	5,95	0,03	0	0,01			
01706071	0,13	0,29	1,42	0,07	2,5	0,19	5,83	0,02	0	0,01			

Elemente ohne Angabe < 0,01 % / Elements without indication < 0,01 %

## 2. Mechanische Eigenschaften Mechanical Properties / Valeurs Mécaniques

Anforderungen Specification	Rm N/mm <sup>2</sup>	Rp0,2 N/mm <sup>2</sup>	A5 %	A 50 %	HB	Heat No.
min:	531	455				
max:						
1	576	535	11,7	9,0		947/09 - 11 pcs.

max. RMS 25 - max. 10,2 µ"

**Ergebnis der Prüfung:** Es wird bestätigt, daß die Lieferung geprüft wurde und den Vereinbarungen bei der Bestellannahme entspricht

**Test results:** We confirm that the delivery has been tested and applies to the agreements made on receipt of the order

**Resultats:** Nous confirmons que la livraison a été contrôlée et correspond avec les conventions faites à la réception de la commande

Kramper  
24.09.2007



Zertifiziert nach DIN EN ISO 9001:2000, gültig bis 2009-03-27  
Zertifikat- Register- Nr.: 001959 QM



Aluminiumwerk Unna AG, Uelzener Weg 36, 59425 Unna, Germany

Abnahmebeauftragter

Customer PO	PO. 00003995
ALUnna ref. no.	25361/1
Date:	09.20.07

Dart Aerospace PO. 00003995  
D 6008-132  
Made in Germany Dest. Hawkesbury Ont. Canada

**free from live plant pests**

[illegible]